NGSS Progressions
K-2 -- HS
Taking Time to Get it Right
Developing a Purposeful Plan for Transitioning to NGSS

http://www.create4stem.msu.edu/ngss

Developed for the Introduction to the Next Generation Science Standards
CREATE for STEM Institute, Michigan State University, May 28, 2013
Developed by David Bydlowski, Wayne RESA
Documents of Importance

- Appendix E – Disciplinary Core Ideas Progression
- Appendix F – Science and Engineering Practices
- Appendix G – Crosscutting Concepts
- NGSS Topic Progression Comparison with MI HSCE/GLCE (notebook, will be online)
- NSTA Matrix of DCI in NGSS
- Online View of the Expectations

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Appendix E – Disciplinary Core Ideas Progression – Guiding Principles

- Built on the notion of learning as a developmental progression.

- Focuses on a limited number of core ideas in science and engineering both within and across the disciplines.

- Emphasizes that learning about science and engineering involves integration of the knowledge of scientific explanations (i.e., content knowledge) and the practices needed to engage in scientific inquiry and engineering design.

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Your Turn

- Select a progression for K-2 – HS
- Discuss it
- Is this anything new?
- What is the “take away” message?

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Appendix F – Science and Engineering Practices – Guiding Principles

• Students in grades K-12 should engage in all eight practices over each grade band.

• Practices grow in complexity and sophistication across the grades.

• Practices represent what students are expected to do, and are not teaching methods or curriculum.
Your Turn

- Select a progression for K-2 – HS
- Discuss it
- Is this anything new?
- What is the “take away” message?
Appendix G – Crosscutting Concepts – Guiding Principles

- Repetition in different contexts will be necessary to build familiarity.

- Crosscutting concepts should grow in complexity and sophistication across the grades.

- Crosscutting concepts can provide a common vocabulary for science and engineering.

- Crosscutting concepts should not be assessed separately from practices or core ideas.
Your Turn

- Select a progression for K-2 – HS
- Discuss it
- Is this anything new?
- What is the “take away” message?
NGSS Topic Progression Comparison with MI HSCE / GLCE

- There has always been a progression of learning built into the MI Expectations

- Crosswalk – Provides a “place to start” for your implementation. This is not for “retrofitting” it provides a way for you to “start now.”

- Focus?
  - Content
  - Practices (Inquiry)
  - Cross Cutting Concepts

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Your Turn

- Select a progression for K-2 – HS
- Discuss it
- Is this anything new?
- What is the “take away” message?
NSTA Matrix of DCI in NGSS

- NSTA
- Focus on Disciplinary Content Ideas
Your Turn

- Select a progression for K-2 – HS
- Discuss it
- Is this anything new?
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Online View of the Expectations

- Select a DCI
- Scroll to the bottom of the foundations boxes
- Articulation of DCI’s across Grade Levels
- Select a Topic
- Scroll to the bottom of the foundation boxes
- Topic Progression is Provided.

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